

South Sudan

Integrated Disease Surveillance and Response (IDSR)

Epidemiological Update W20 2018 (Apr 14- May 20)



Ministry of Health
Republic of South Sudan



World Health
Organization
South Sudan

- Completeness for IDSR reporting at county level was 56% . Completeness for EWARS reporting from IDP sites was 78%

- A total of 14 alerts were reported, of which 100% have been verified.

- Two suspect cholera cases reported from Imehejek in Lopa on 22 May 2018 tested negative on culturing.

- Rift Valley Fever outbreak - Yirol East with 57 suspect human cases including 6 confirmed; 3 probable; 26 non-cases; and 22 pending classification (with no definitive lab. test results). Nine confirmed animal cases (cattle).

- Suspect rabies cases continue to be reported in Bentiu PoC with a cumulative of 194 suspect cases including 2 deaths reported since Dec 2017. Community engagement, social mobilization, and risk communication, preventive vaccination, and discussions on curling stray dogs are underway.

- Hepatitis E cases have been confirmed in Bentiu PoC and Old Fangak where a total of 51 suspect cases have been reported. Out of the 51 suspect cases; 11 have been confirmed positive for HEV by PCR (10 positive in Bentiu PoC and 1 positive in Old Fangak). The Ministry of Health and partners are working together to enhance surveillance, case investigation, sample collection, supportive clinical care, and WASH.

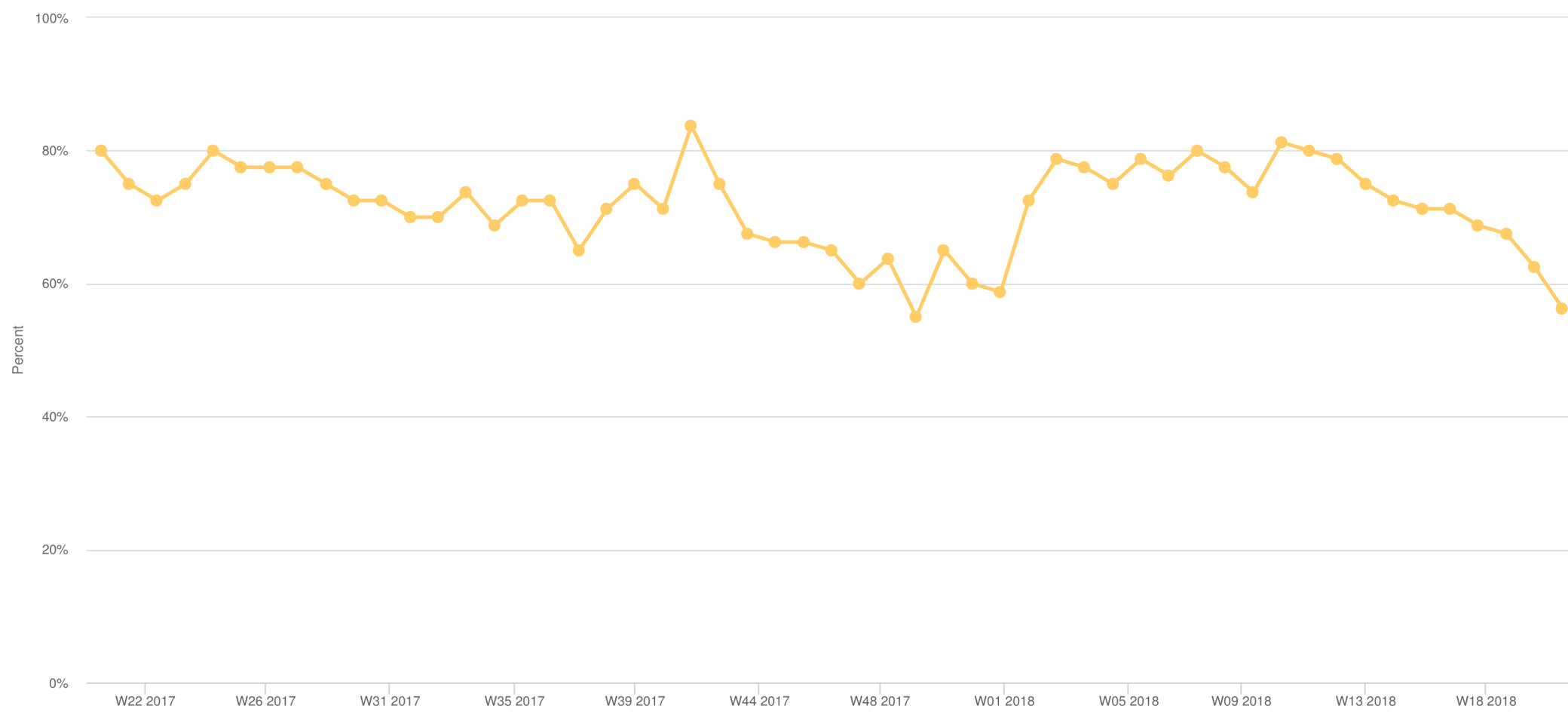
- New suspect measles cases reported in Rumbek Center, Mayom, Torit, Wau, and Juba counties.

Table 1 | IDSR surveillance performance indicators by county (W20 2018)

Hub	Reporting		Performance (W20 2018)		Performance (Cumulative 2018)	
	# counties	# reports received	Completeness	Timeliness	Completeness	Timeliness
Aweil	5	4	80%	80%	78%	78%
Bentiu	9	1	11%	11%	73%	52%
Bor	11	2	18%	18%	43%	39%
Juba	6	6	100%	100%	77%	58%
Kwajok	7	7	100%	100%	95%	85%
Malakal	13	1	8%	8%	25%	11%
Rumbek	8	5	63%	63%	89%	86%
Torit	8	7	88%	88%	93%	68%
Wau	3	2	67%	67%	84%	70%
Yambio	10	10	100%	100%	94%	94%
South Sudan	80	45	56%	56%	70%	56%

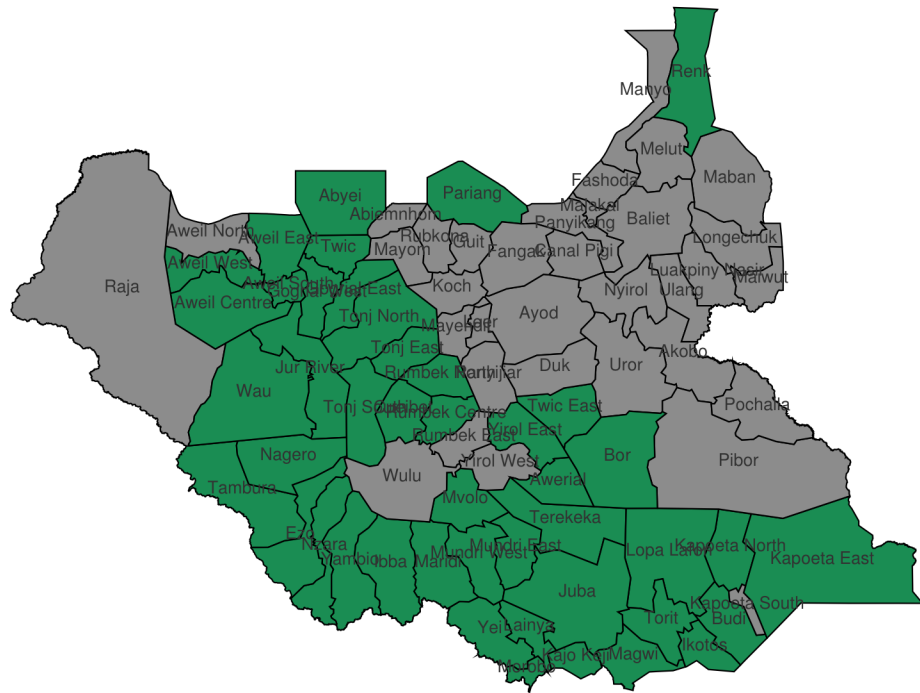
- Completeness for IDSR reporting at county level was 56% in week 20 and cumulatively at 74% for 2018
- Timeliness for IDSR reporting at county level was 56% in week 20 and cumulatively at 56% for 2018

Figure 1 | Trend in IDSR completeness over time¹

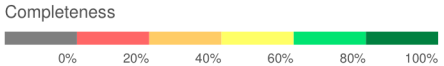
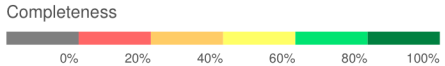
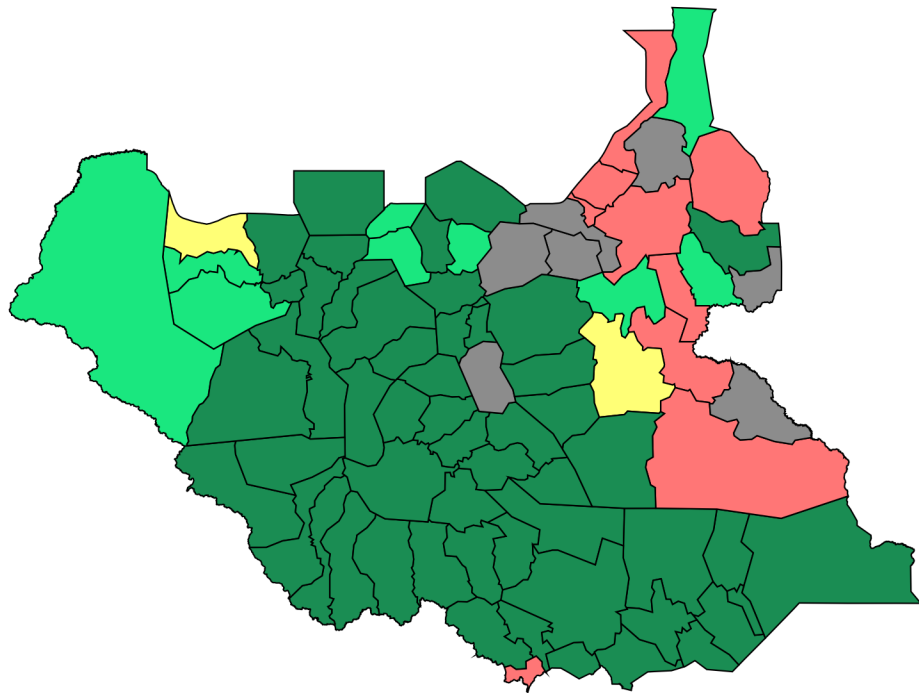


The graph shows completeness for weekly reporting at county level. The national average currently stands at **70%**.

Map 1a | Map of IDSR completeness by county (W20 2018)



Map 1b | Map of IDSR completeness by county (2018)



- Counties that submitted IDSR reports in W20 are shown in green in map 1a
- Counties that did not submit IDSR reports in W20 are shown in grey in map 1a

Table 4 | EWARS surveillance performance indicators by partner (W20 2018)

Partner	Performance		Reporting (W20 2018)		Reporting (Cumulative 2018)	
	# sites	# reports received	Completeness	Timeliness	Completeness	Timeliness
CMD	1	1	100%	100%	95%	95%
GOAL	2	2	100%	100%	95%	81%
HLSS	1	1	100%	100%	95%	95%
IMA	5	5	100%	100%	68%	64%
IMC	6	6	100%	100%	88%	87%
IOM	10	9	90%	90%	74%	74%
IRC	1	1	100%	100%	95%	95%
Medair	2	2	100%	100%	95%	90%
MSF-E	2	0	0%	0%	81%	67%
MSF-H	2	1	50%	50%	60%	45%
SMC	5	4	80%	80%	57%	57%
UNIDO	1	1	100%	100%	95%	95%
UNKEA	2	0	0%	0%	76%	76%
World Relief	1	1	100%	100%	95%	76%
Total	46	36	78%	78%	70%	67%

Timeliness and completeness for EWARN/IDP reporting stands at 78% for week 20 while cumulatively, completeness and timeliness are 70% and 67% respectively for 2018

Table 7 | Alert performance indicators by Hub

Hub	W20		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Aweil	0	0%	22	100%
Bentiu	1	100%	40	70%
Bor	0	0%	28	57%
Juba	5	100%	44	80%
Kwajok	0	0%	28	100%
Malakal	1	100%	27	63%
Rumbek	1	100%	27	63%
Torit	2	100%	29	72%
Wau	2	100%	15	60%
Yambio	2	100%	51	67%
South Sudan	14	100%	311	73%

Table 8 Summary of key alert indicators

W20	Cumulative (2018)	
14	311	Total alerts raised
100%	73%	% verified
0%	0%	% auto-discarded
0%	2%	% risk assessed
0%	1%	% requiring a response

A total of 14 alerts were reported in week 20 with 100% of the alerts in week 20 being verified; 0% were risk assessed and 0% required a response.

Table 9 | Alert performance indicators by event

Event	W20		Cumulative (2018)	
	# alerts	% verif.	# alerts	% verif.
Indicator-based surveillance				
Malaria	1	100%	47	70%
AWD	4	100%	148	72%
Bloody Diarr.	2	100%	81	50%
Measles	4	100%	62	79%
Meningitis	0	0%	0	0%
Cholera	0	0%	5	100%
Yellow Fever	0	0%	4	75%
Guinea Worm	0	0%	11	82%
AFP	0	0%	45	92%
VHF	0	0%	1	100%
Neo. tetanus	0	0%	3	67%
Event-based surveillance				
EBS total	3	100%	18	83%

Table 10 | Event risk assessment

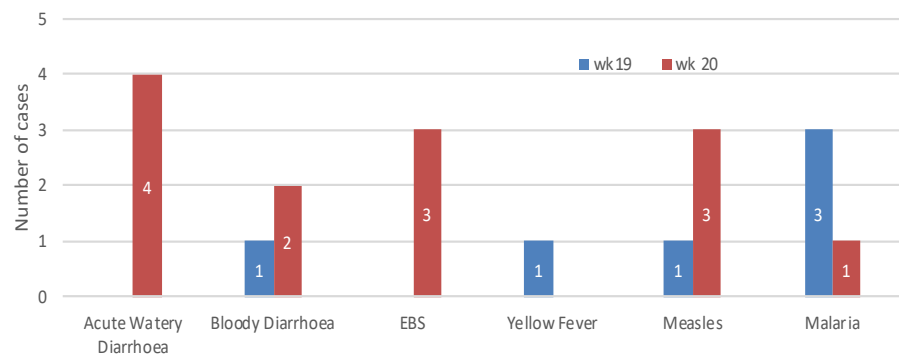
W20	Cumulative (2018)	
0	4	Low risk
1	1	Medium risk
0	1	High risk
0	0	Very high risk

- During the week, AWD and measles were the most frequent infectious hazards reported.

Alert by disease and county in W20 2018

County	Acute Watery Diarrhoea	Diarrhoea	EBS	Measles	Malaria	Total Alerts
Ezo	1					1
Juba		1	3	1		5
Kapoeta North	1					1
Malakal	1					1
Mundri East					1	1
Rubkona	1					1
Torit				1		1
Wau		1		1		2
Total Alerts	4	2	3	3	1	13

Alerts by hazard in week 19 and week 20, 2018



- During week 20, a total of 13 alerts reported
- Teams dispatched for dysentery investigation in 10 hubs

Acute watery diarrhoea and fever

- **7 AWD deaths** reported in **Jebel Boma**, Boma state - verification report awaited from **IMA**

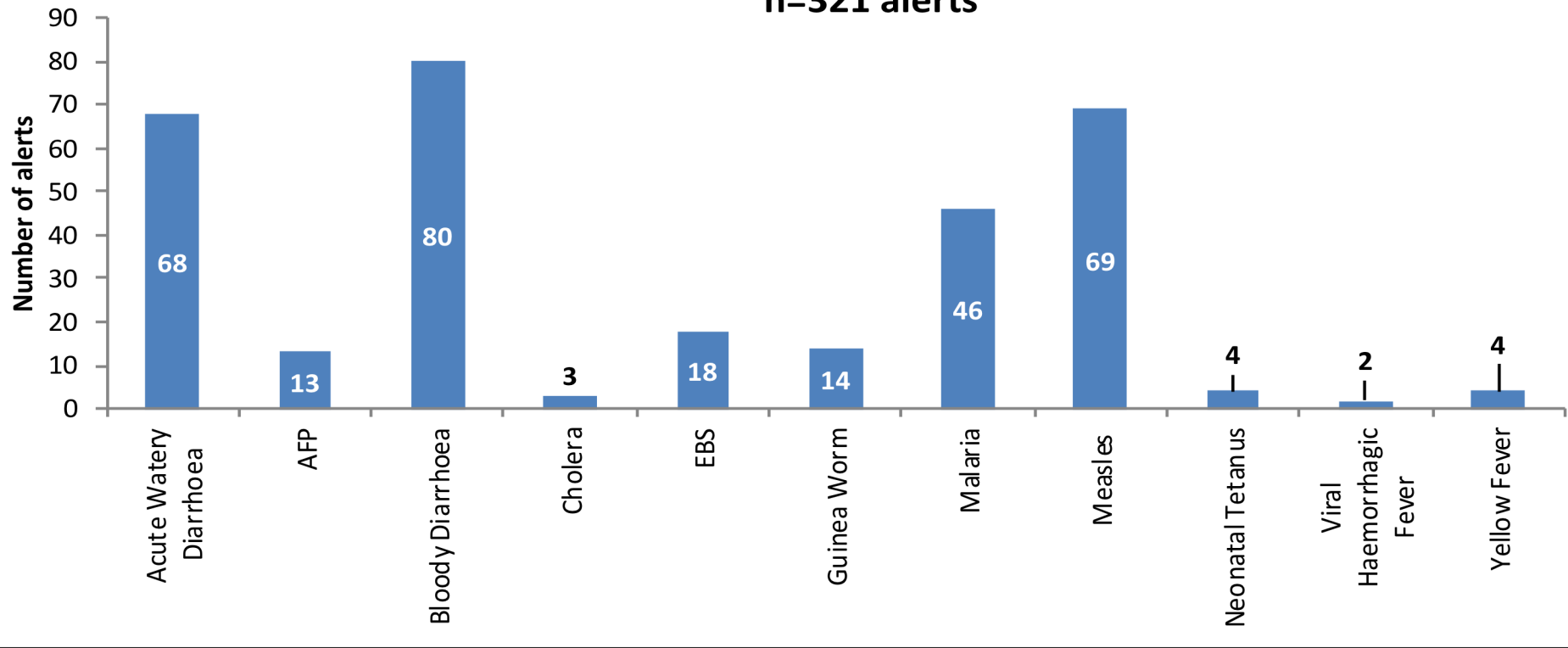
Suspect measles

- **Eight suspect measles** cases reported from **Rumbek Centre** - MMT to be dispatched for the investigation
- **Two suspect measles** cases reported from **Mayom** (Tam & Wangbur payams) samples sent to Juba by MSF-CH
- **One suspect measles** case reported from **Nyong** payam in **Torit**. Specimen collected

Suspect cholera cases - Lopa county

- **Two suspect cholera** cases reported from **Imehejek**, Lopa from **22May18**; the index ate cold food at a local market; **direct RDT positive for cholera**; all two samples negative for cholera after culturing in NPHL.

Number of Alerts by disease, South Sudan, week 1-20, 2018
n=321 alerts



• The Figure shows the cumulative number of alerts triggered in 2018 by hazard and location.

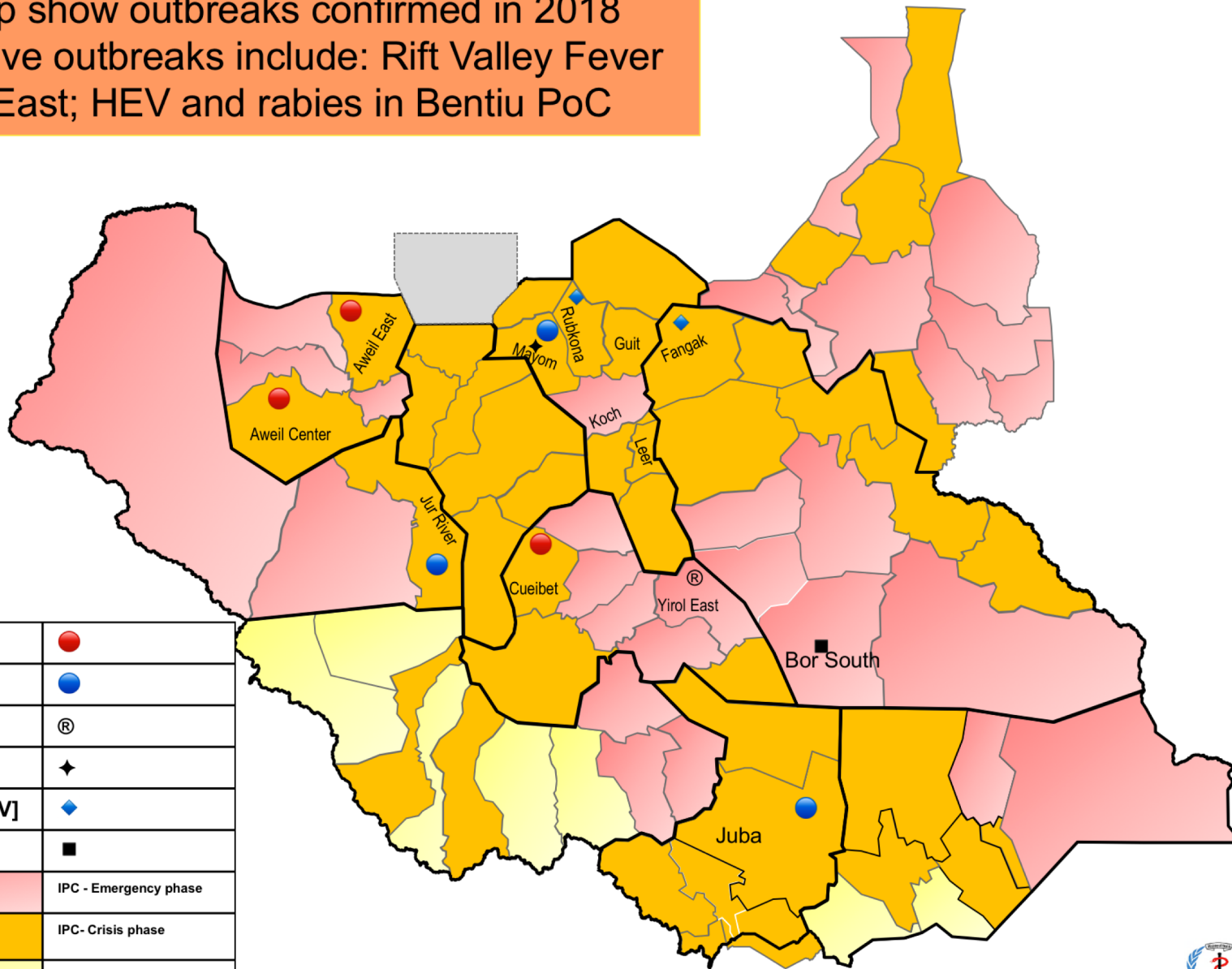
Cumulative alerts by risk assessment stage in 2018

County	OUTCOME	RISK_A SSESS	VERIFICATI ON	Total Alerts
Acute Watery Diarrhoea			68	68
AFP		1	12	13
Bloody Diarrhoea			80	80
EBS		2	16	18
Guinea Worm	2		12	14
Neonatal Tetanus	2		2	4
Viral Haemorrhagic Fever			2	2
Yellow Fever			4	4
Measles	4	6	59	69
Cholera			3	3
Malaria			46	46
Total Alerts	8	9	304	321

- The Figures show the cumulative alerts by risk assessment state in 2018
- Of the 321 alerts reported in 2018; a total of 304 alerts are at verification stage; and the rest are at risk assessment stage (9 alerts); 8 at outcome stage.

Confirmed Outbreaks South Sudan – 27 May 2018

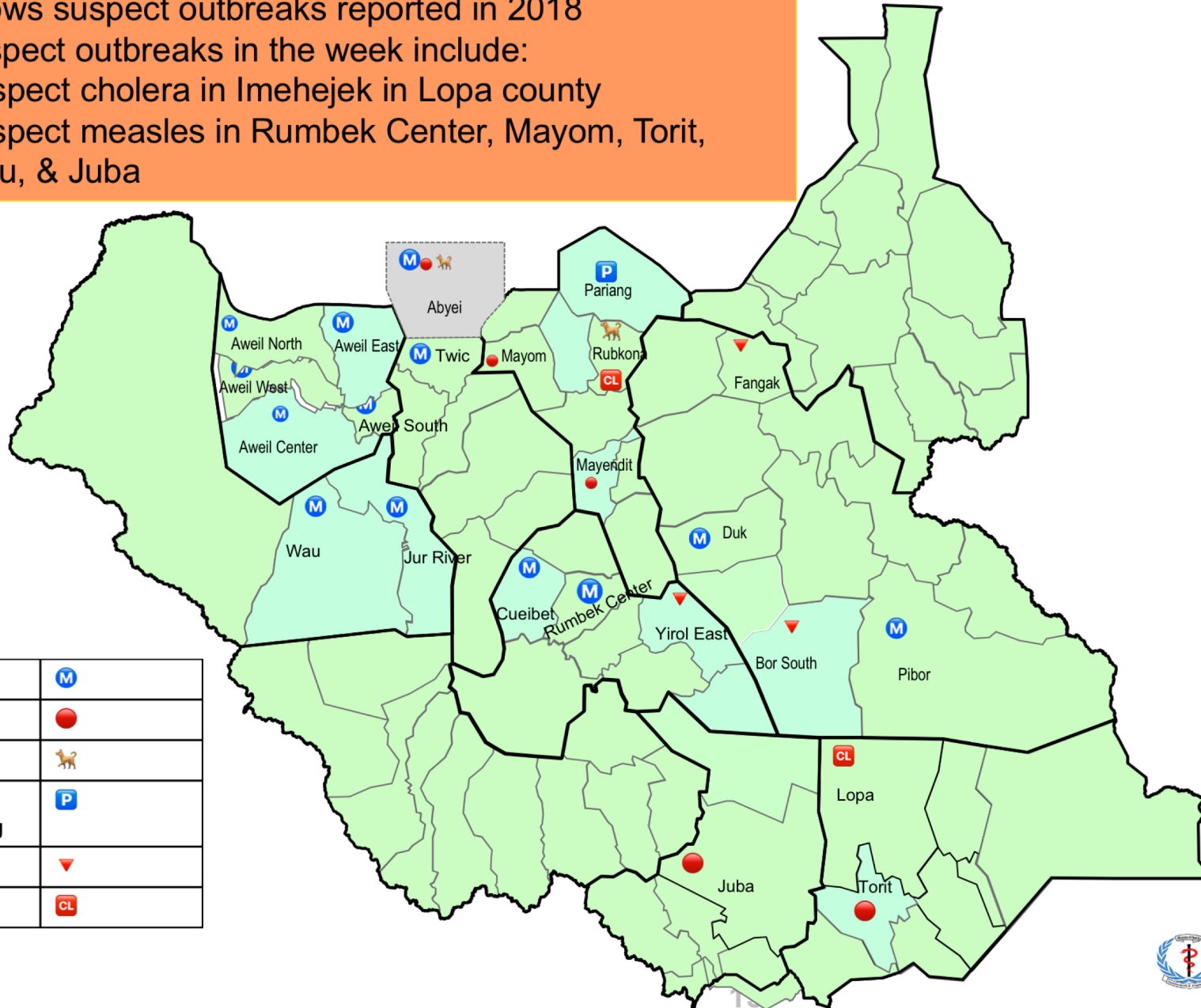
- The map show outbreaks confirmed in 2018
- The active outbreaks include: Rift Valley Fever in Yirol East; HEV and rabies in Bentiu PoC



Measles	●
Rubella	●
Rift Valley Fever	®
Anthrax	◆
Hepatitis E virus [HEV]	◆
Foodborne disease	■
	IPC - Emergency phase
	IPC- Crisis phase
	IPC - Stressed phase

Suspect Outbreaks South Sudan – 27 May 2018

- Map shows suspect outbreaks reported in 2018
- New suspect outbreaks in the week include:
 - Suspect cholera in Imehejek in Lopa county
 - Suspect measles in Rumbek Center, Mayom, Torit, Wau, & Juba



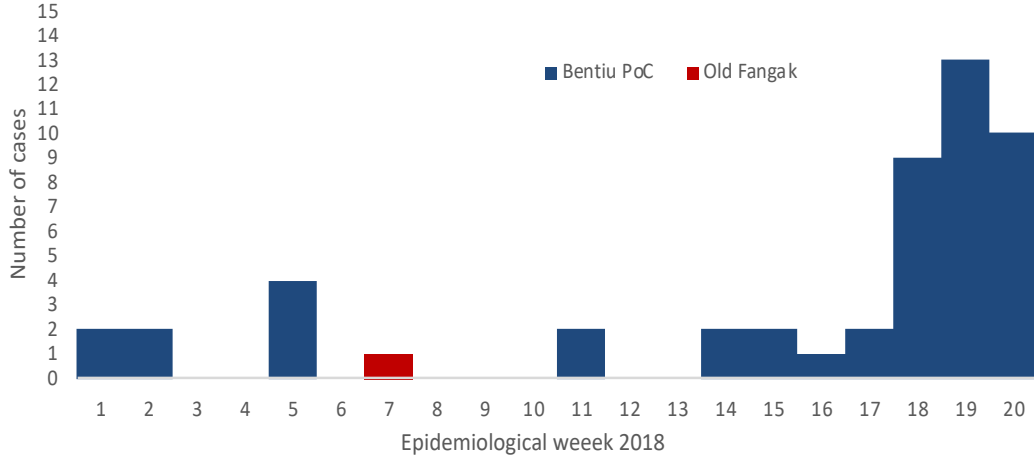
Meningitis	M
Measles	●
Rabies	🐕
Health effects of petroleum drilling	P
Pertussis	▼
Cholera	CL

Aetiologic agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Interventions			
					Case management	Vaccination	Health promotion	WASH
New epidemics								
Ongoing epidemics								
RVF	Yirol East	28/12/2017	0	57 (0.053)	Yes	N/A	Yes	N/A
Hepatitis E	Bentiu PoC	03/01/2018	10	51 (0.044)	Yes	No	Yes	Yes
Rabies probable	Bentiu PoC	06/12/2017	11	194 (0.166)	Yes	Yes	Yes	N/A
Controlled epidemics								
Hepatitis E	Old Fangak	15/02/2018	0	01 (0.001)	Yes	No	Yes	Yes
Rubella	Jur River	14/02/2018	0	76 (0.039)	Yes	No	Yes	N/A
Rubella	Juba	26/02/2018	0	22 (0.0037)	Yes	No	Yes	N/A
Rubella	Mayom	22/02/2018	0	08 (0.004)	Yes	No	Yes	N/A
Measles	Aweil Center	6/Jan/2018	0	22 (0.021)	Yes	Yes	Yes	N/A
Measles	Cueibet	14/10/2017	0	20 (0.012)	Yes	Yes	Yes	N/A
Measles	Aweil East	05/02/2018	0	31 (0.006)	Yes	Yes	Yes	N/A
Foodborne	Bor South	18/02/2018	0	434 (29)	Yes	Yes	Yes	Yes
Cut. Anthrax	Mayom	27/01/2018	0	2 (0.001)	Yes	No	Yes	N/A
Meningitis	Torit	17/01/2018	0	173 (0.107)	Yes	No	Yes	N/A

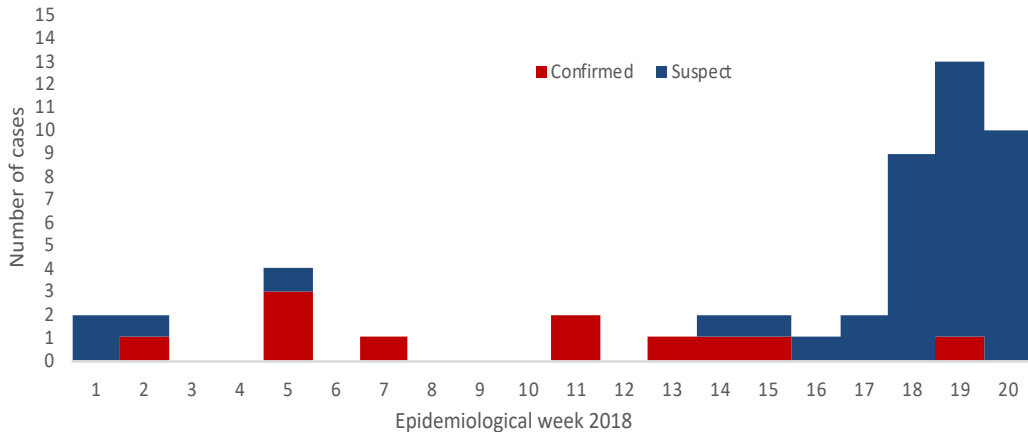
- There are no new confirmed outbreaks in the week
- Ongoing and controlled outbreaks in 2018 are shown in the table

Hepatitis E, Bentiu PoC and Old Fangak

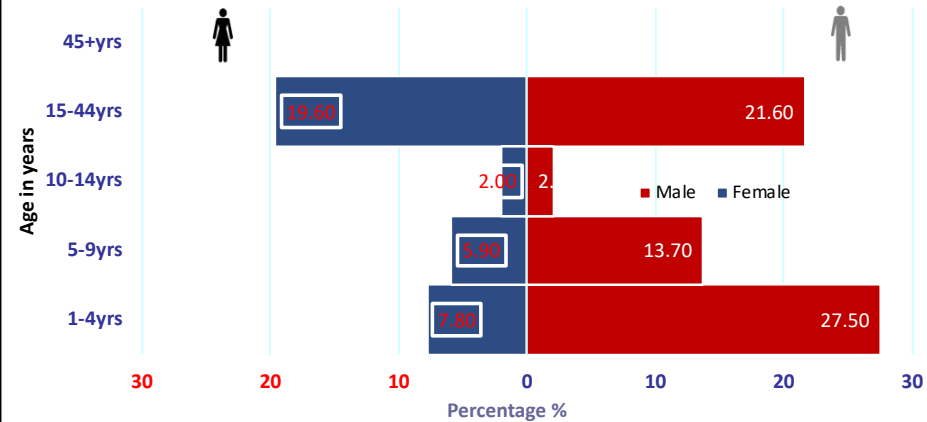
Hepatitis E cases reported in by location, week 1-20, 2018



Hepatitis E cases reported in by Epi classification, week 1-20, 2018

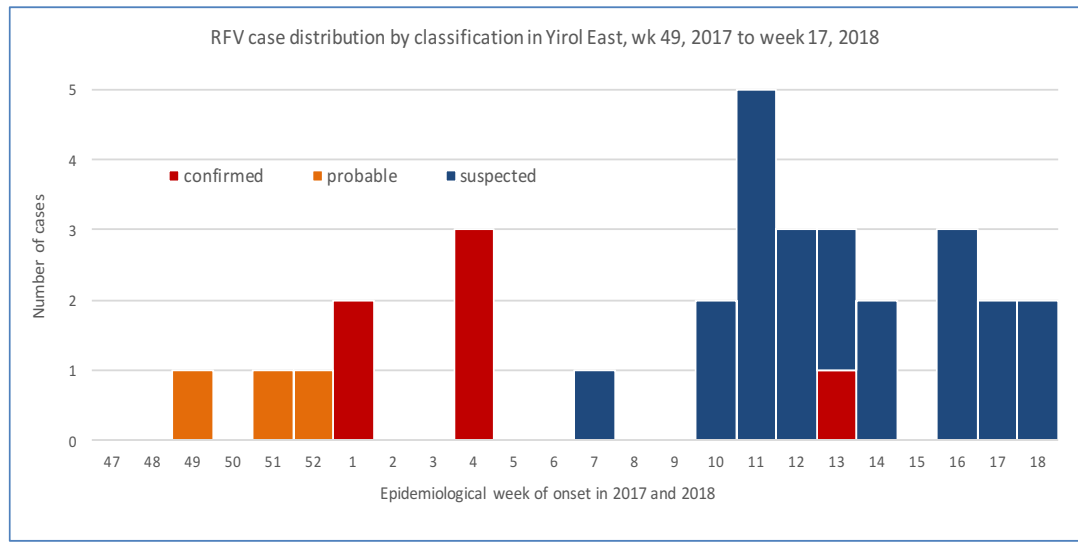
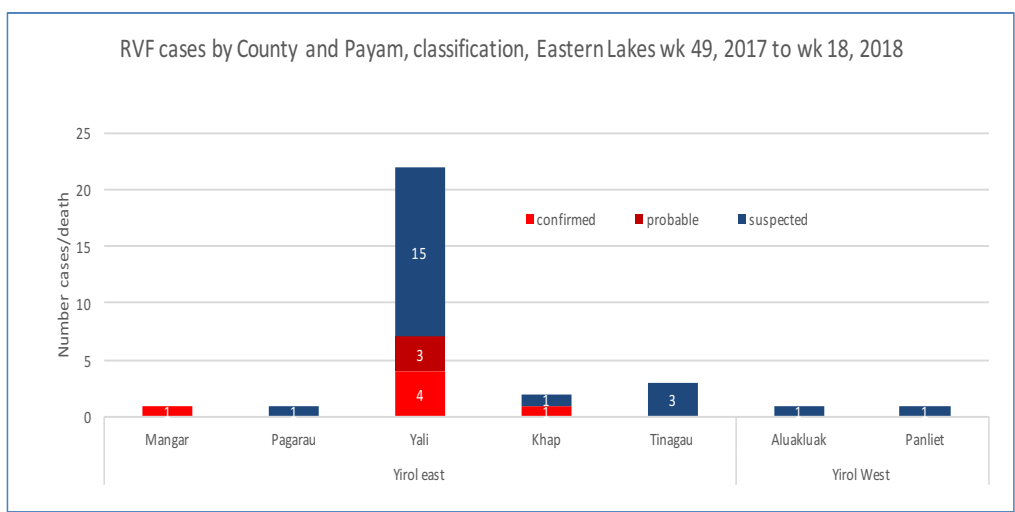
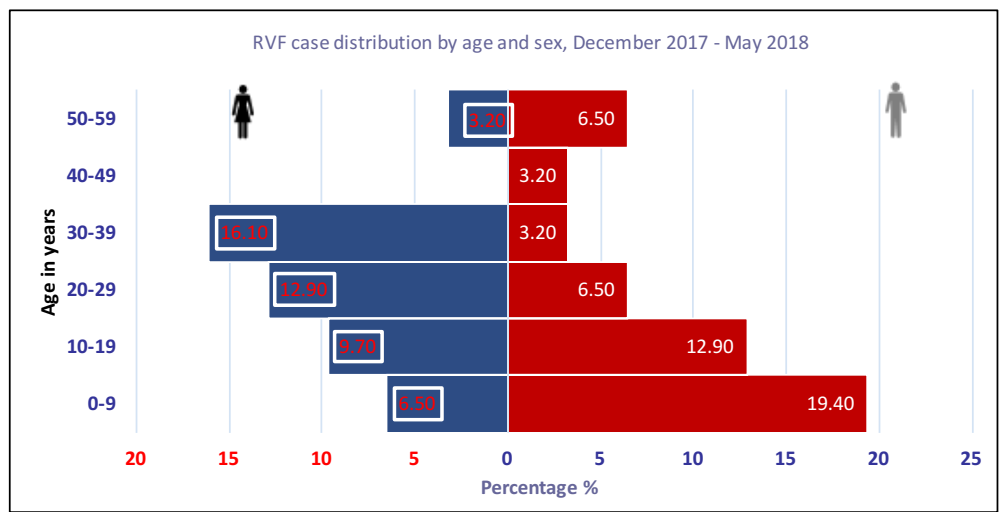


HEV case distribution by age and sex, Bentiu PoC Jan-May 2018



- At least 51 suspect case of Hepatitis E (HEV) have been reported in 2018. Of the 51 suspect cases, a total of 11 cases have been PCR confirmed as HEV (10 in Bentiu PoC & 1 in Old Fangak). No new cases identified after active follow up in Fangak.
- At least 54.9% of the cases are 1-9 years of age; and 65% being male. Among the females, most cases have been reported in those aged 15-44 yrs (who are at risk of adverse outcomes if infected in the 3rd trimester of pregnancy).
- Partner training on HEV done in Bentiu on 7/05/18. The same day, meeting convened with community leaders in Bentiu to alert them about HEV epidemic.
- Unicef has shared key HEV messages - for radio programs on [Kondial FM & Bentiu FM] and community sensitizations.
- Case identification and follow up is ongoing and WASH risk assessment has been planned.

Ongoing epidemics - Epidemic description - RVF Eastern Lakes state

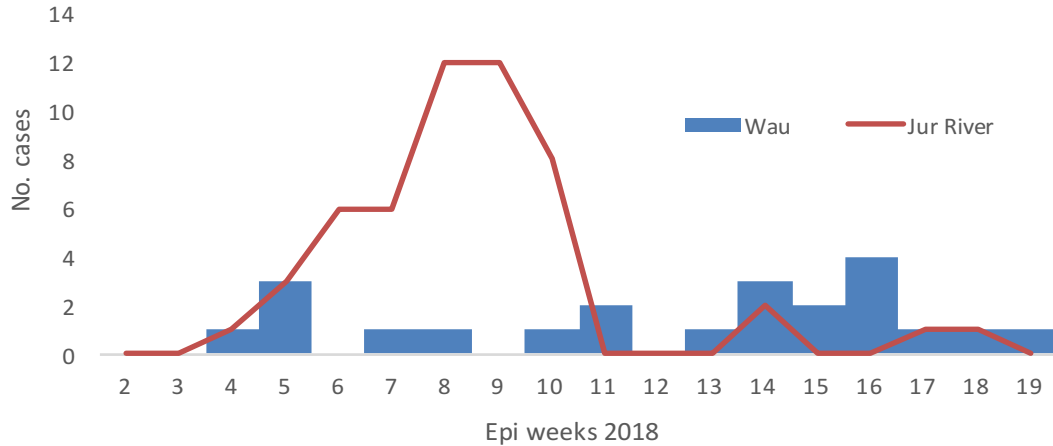


Sno.	Description	Number
1	Suspect cases	57
2	Total deaths	4
3	Confirmed cases	6
4	Probable cases	3
5	Cases pending testing	22
6	Non-cases	26
7	Cases on admission	0
8	Total human samples collected	39
9	Total animal samples collected	28
10	Positive animal cases	9

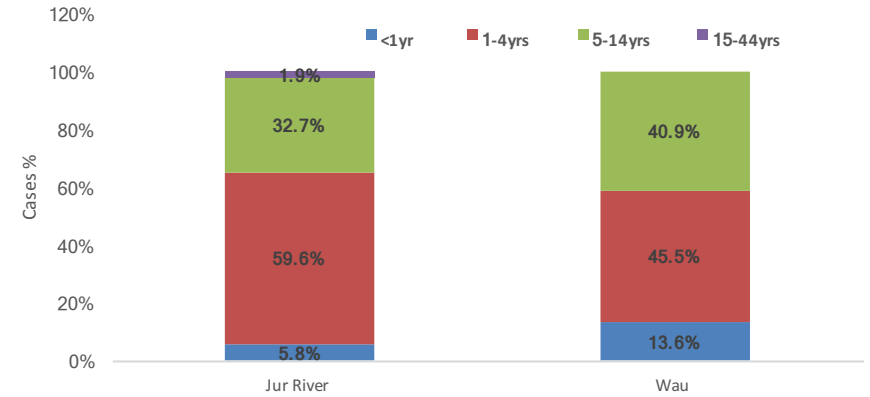
- In the period 7 December 2017 to 10 May 2018, a total of 57 suspect RVF cases were reported in Eastern Lakes.
- These were reclassified based on investigations and laboratory results, such that as of 10th May 2018, there were a total of six (6) RVF confirmed cases, three (3) probable, and 22 suspect RVF cases (no laboratory results).
- Twenty six (26) cases were discarded as non-cases following negative laboratory results for RVF and other common causes of viral haemorrhagic fever.
- A total of nine animal samples have been confirmed serologically (3IgM and 6IgG).
- Current response entails surveillance, laboratory testing, supportive care for suspect cases, and community sensitization on hygienic animal handling

Rubella in Jur River and Wau counties

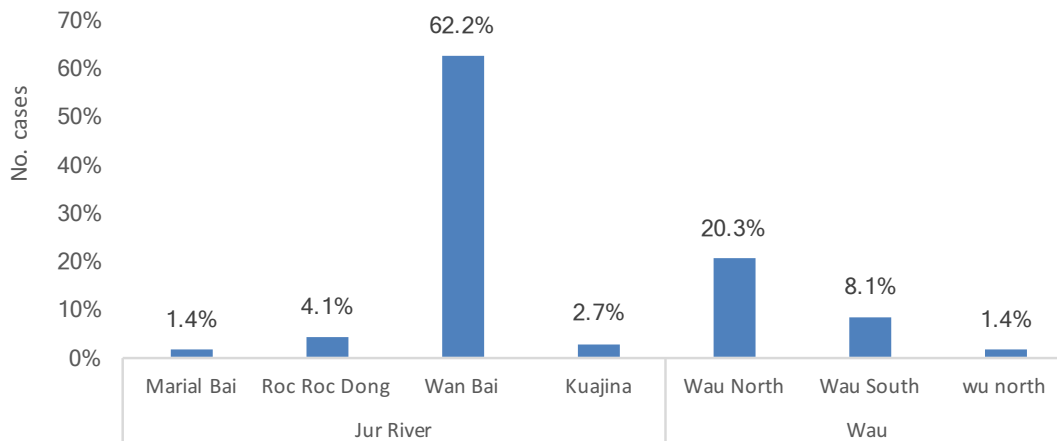
Rubella cases in Wau & Jur River, week 4 to 19, 2018



Rubella case distribution by age - Wau & Jur River Counties

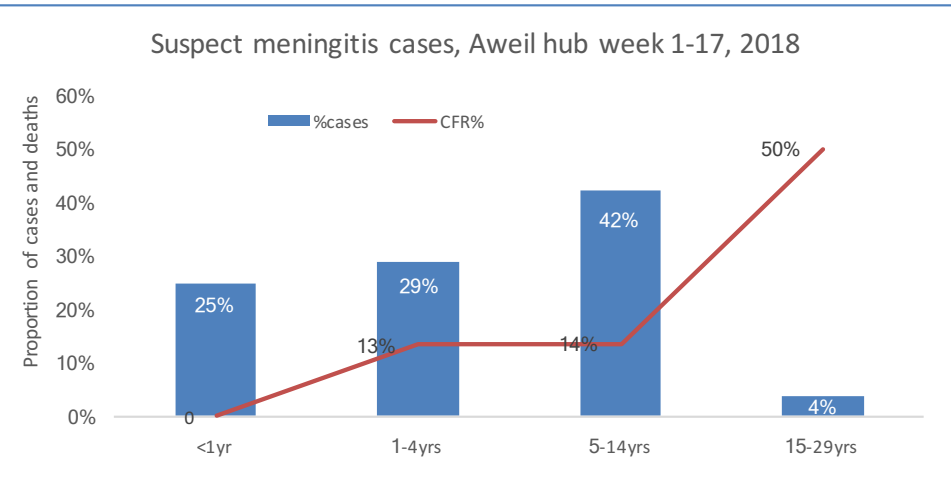
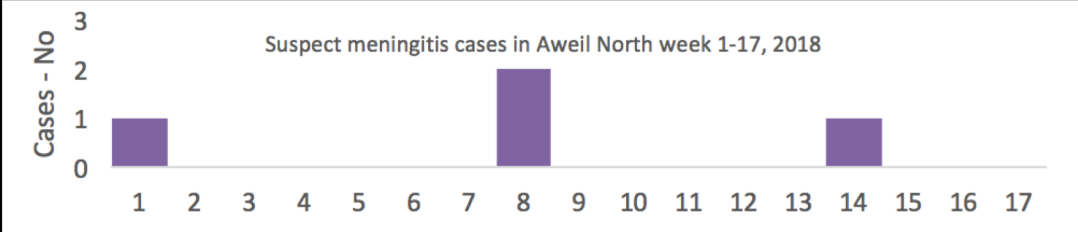
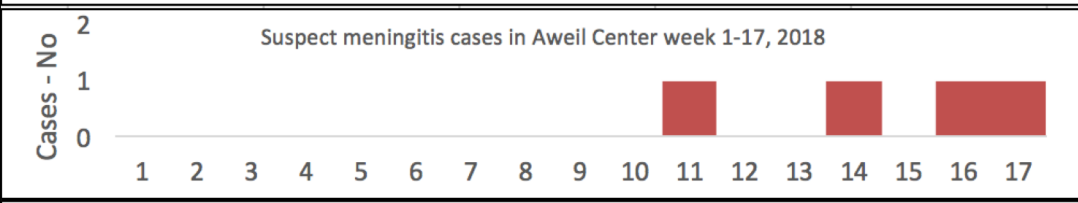
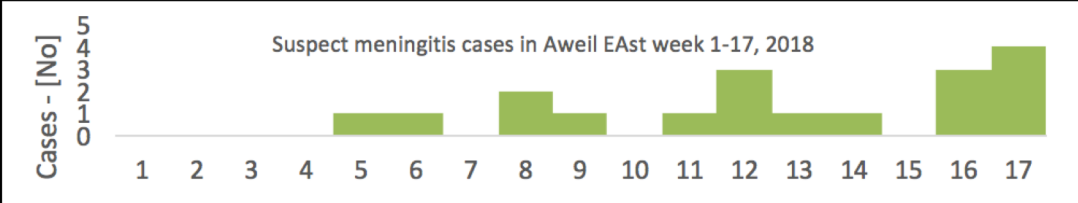
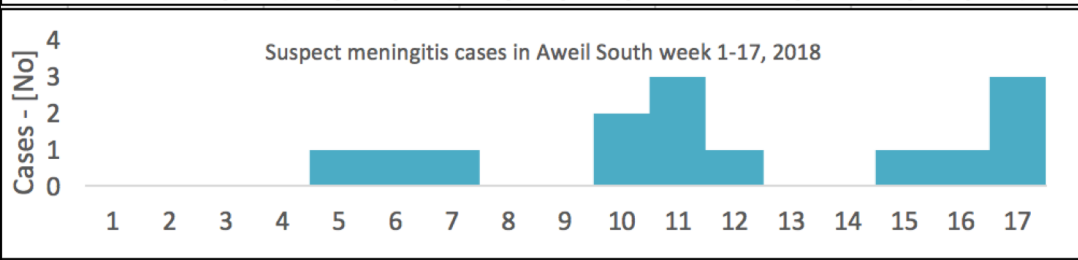
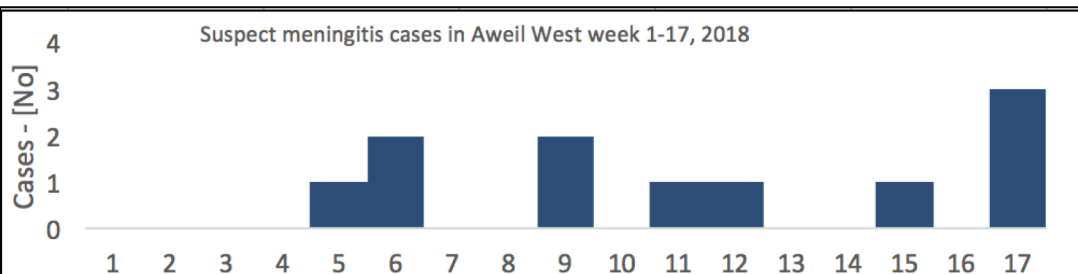


Rubella cases by payam in Jur River and Wau Counties, weeks 4-18, 2018



- At least 76 rubella cases have been reported from Jur River (54 cases) and Wau (22 cases) with no deaths
- Cases have been reported from week 4 of 2018
- Most cases were not vaccinated
- Most cases are aged 1 - 4 years - 65.4% [Jur River] & 59.1% in Wau.
- Most cases (62.2%) are from Wan Bai payam in Jur River county
- Females constitute 40% of the cases reported in Jur River and Wau.
- No cases reported in females of childbearing age.
- The current response entails case identification, line listing, supportive care for suspect cases; and community mobilization for enhanced routine immunization.
- Health authorities (at health facility and CHD) and partners are advised to continue case-based surveillance with sample collection and line listing for suspect cases; provide supportive care to suspect cases; and enhance routine immunization for infants - at static clinics & outreach posts.

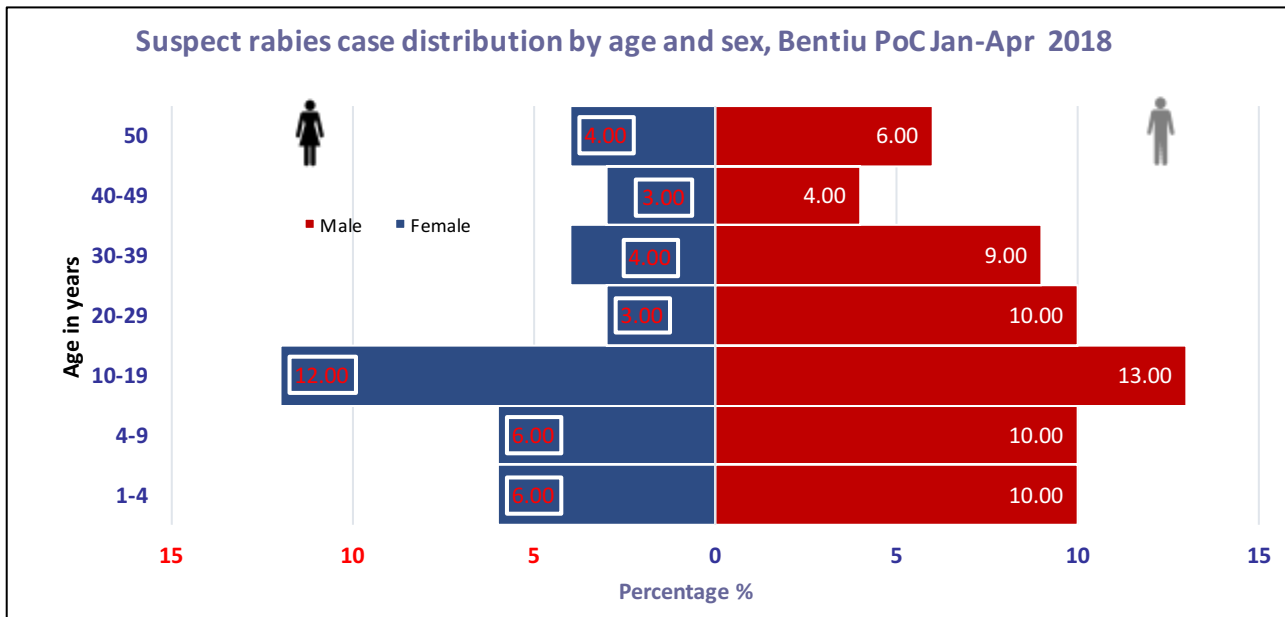
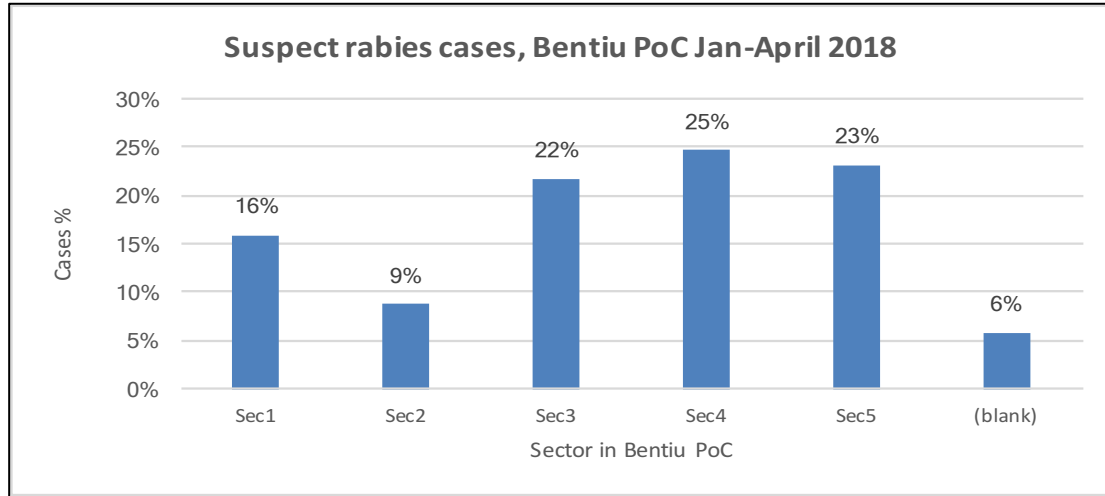
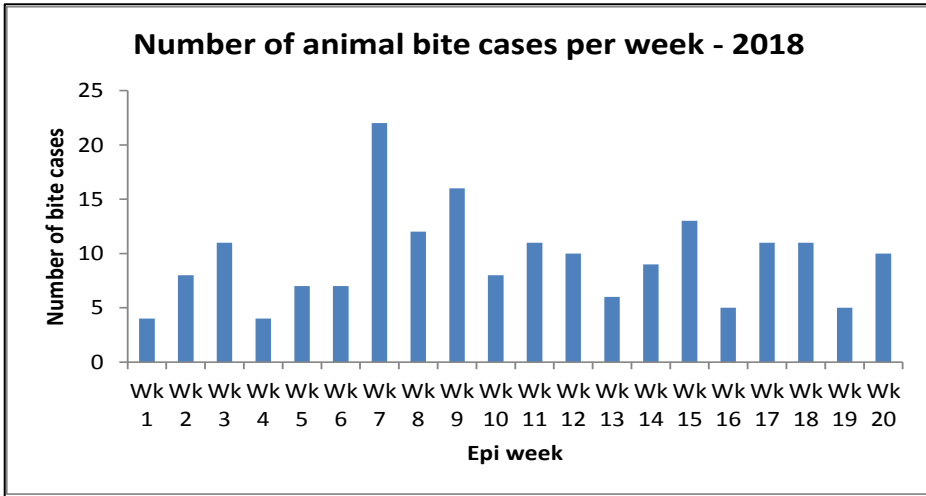
Suspect meningitis cases in Aweil hub



- From week 1-18, 2018; at least 52 suspect meningitis cases including 6 deaths (CFR 11.54%)
- Most cases and deaths reported in 1-4 yrs & 5-14yrs age groups
- Non of the five affected counties attained the alert threshold during the period week 1-17, 2018.
- Six samples positive for *Streptococcus pneumoniae* following rapid pastorex testing or showed gram positive diplococci on gram stain.
- No samples have been submitted to the National Public Health Laboratory for culture and sensitivity testing
- Surveillance officers and partners encouraged to collect samples in TI for culture and sensitivity testing in Juba

County	Cases	Population	AR cases/100,000
Aweil Center	4	105,425	3.79
Aweil East	18	489,714	3.68
Aweil North	4	213,285	1.88
Aweil South	14	112,162	12.48
Aweil West	11	258,616	4.25

Animal bites - suspect rabies, Bentiu PoC



- During week 20, a total of 10 animal bite cases were reported in Bentiu PoC
- A cumulative of 194 animal bite cases including 2 deaths have been reported since 6 Dec 2017.
- Sectors 3,4, &5 have reported most cases and children <19yrs constitute more than 50% of the cases with males affected more than females
- Post exposure vaccination ongoing with support from MSF-H and partners.
- WHO/ health cluster have secured antirabies vaccine to support the response.
- Community messaging underway via CCCM/ internews/ UNMISS broadcast
- Discussions underway on the feasibility of curling stray dogs

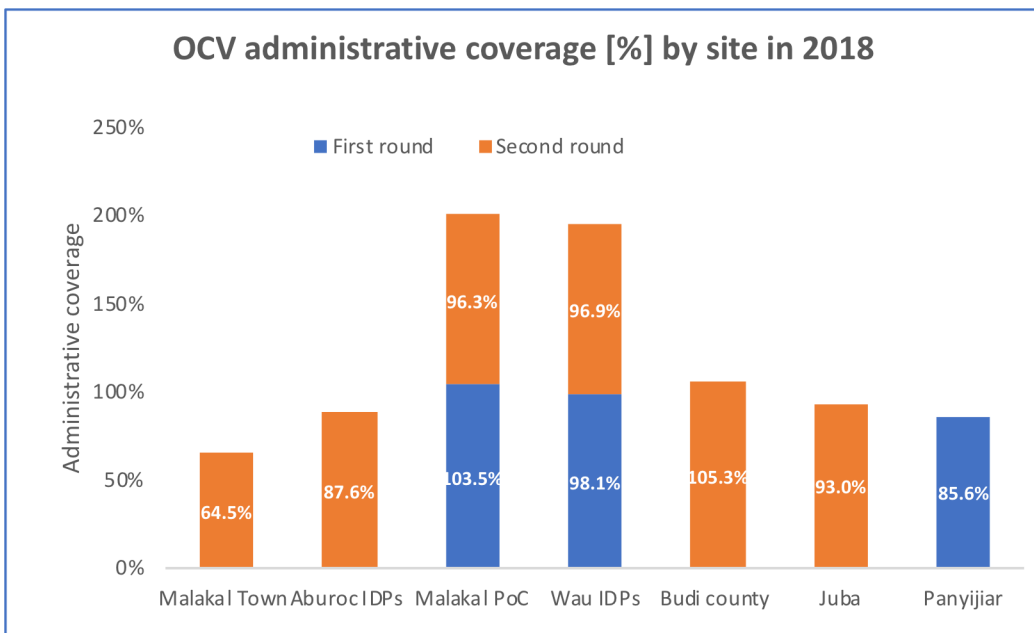
Cholera preparedness and preventive activities - Oral cholera vaccine campaigns - 2018

Site	Total population	Target population	1st round doses	2nd round doses	Total doses	1st Round dates	2nd Round dates	Partners
Aburoc	11,640	11,291		11,550	11,550	20-22May2017	Jan 17- 20 2018	MoH, WHO, Unicef, MSF-E
Malakal Town	20,000	19,200		22,200	22,200	18-24Mar2017	Jan 5 - 9 2018	MoH, WHO, Unicef, MSF-E
Juba	214,887			206,292	206,292	9Sep - 24Nov 2017	Apr 24-28 2018	MoH, WHO, Unicef, MSF-F & Spain
Malakal PoC	24,424	23,691	34,291	34,291	68,582	19-23March 2018	Apr 17-21 2018	MoH, WHO, Unicef, IOM
Wau IDPs	40,499	39,284	56,860	56,860	113,720	19-23March 2018	Apr 17-21 2018	MoH, WHO, Unicef, IOM
Torit	180,169	174,764	174,764	174,764	349,528	30Jun-7Jul 2018	28Jul- 6Aug 2018	MoH, WHO, Unicef, SCI, CARE
Yirol East & West	143,722	139,410	139,410	139,410	278,821	TBD	TBD	MoH, WHO, Unicef, LiveWell
Lankien	65,000	63,050	63,050	63,050	126,100	TBD	TBD	MoH, WHO, Unicef, MSF-H
Panyijiar	76,000	73,720	75,000	75,000	150,000	16-22May2018	TBD	MoH, WHO, Unicef, IRC
Totals	776,341	753,051	543,375	783,417	1,326,793			

- Cholera prevention and response activities are already underway to mitigate the risk of cholera outbreaks in cholera transmission hotspots
- These efforts are critical now at the rain season is starting for the states in the Southern parts of the country.
- The use of oral cholera vaccines alongside WASH and other interventions is critical to these efforts
- Preventive vaccine campaigns (with oral cholera vaccines) for the first half of 2018 are listed in the table
- A additional 113,800 doses of oral cholera vaccines requested from GTFCC arrived in the country on 18/04/2018.
- GTFCC secured support from GAVI for a consultant that is in the country to finalize the cholera prevention and response plan for South Sudan

- **Oral cholera vaccine campaigns completed in 2018 include:**
 - Malakal Town (2nd round)
 - Aburoc IDPs (2nd round)
 - Malakal PoC (1st & 2nd round)
 - Wau PoC+IDPs (1st & 2nd round)
 - Juba Town (1st & 2nd round)
 - Panyijiar (1st round)
- **Upcoming campaigns for 2018**
 - Panyijiar (2nd round)
 - Torit (1st round)
 - Yirol East and parts of Yirol West (1st round)
 - Lankien, Akobo, Pieri & Karam (1st round)

Oral cholera vaccine campaigns administrative coverage - 2018



2018 OCV campaigns			First round		Second round	
	Site	Target	Coverage	Coverage	Coverage	Coverage %
1	Malakal Town	19,200			12,393	64.5%
2	Aburoc IDPs	9,683			8,484	87.6%
3	Malakal PoC	23,447	24,277	103.5%	22,588	96.3%
4	Wau IDPs	37,048	36,337	98.1%	35,887	96.9%
5	Budi county	89,377			94,128	105.3%
6	Juba	216,852			201,737	93.0%
7	Panyijiar	75,000	64,214	85.6%		
	Total	470,607	124,828	92.1%	375,217	94.8%

The following OCV campaigns have been completed in 2018:

1. Malakal Town (2nd round)
2. Aburoc IDPs (2nd round)
3. Budi county (2nd round)
4. Malakal PoC (1st & 2nd round)
5. Wau PoC+IDPs (1st & 2nd round)
6. Juba (2nd round)
7. Panyijiar (1st round)

• OCV 2nd round in Juba

- Ran from 25 Apr to 22 May 2018
- Target - 216,852 - one year and above
- Total vaccinated - 201,737 (93%); out of which:
 - 106,868 (53%) received their 2nd OCV dose in the 2nd round
- Reasons for low 2nd dose: long delay of 8 months b/n 1st & 2nd rounds; dynamic Juba population; people feared they would not be vaccinated if they indicated they had received the first dose; inconsistent recording of verbally reported first dose by vaccinators

• OCV 1st round in Panyijiar

- Ran from 16th to 20th May 2018
- Out of the 75,000 targeted; a total of 64,214 (85.6%) were vaccinated

Ebola DR Congo update & risk to South Sudan

Situation as of 25 May 2018

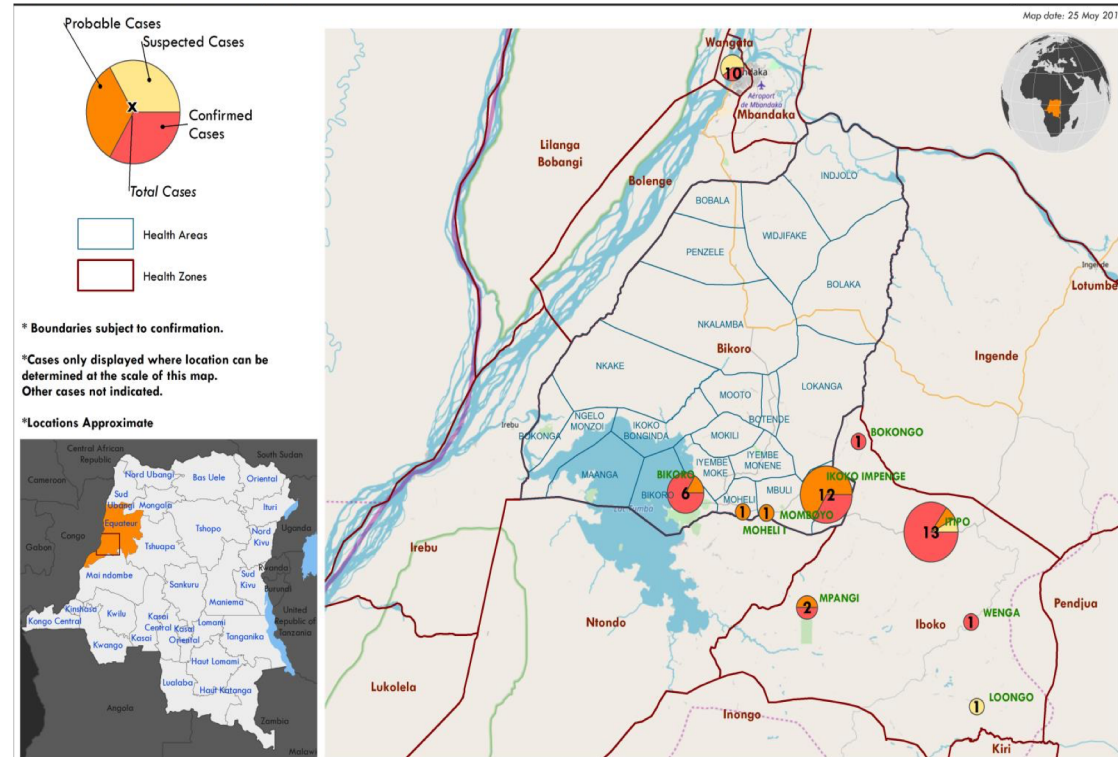
Confirmed cases: 31

Probable cases: 13

Suspect cases: 8

Total cases: 52 (22 deaths CFR 42.3%)

- The MoH DR Congo declared an outbreak of Ebola virus disease on 8 May 2018 Equateur province in Northwestern DR Congo
- The epidemic is active in three health zones - Bikoro (23 cases & 16 deaths); Iboko (24 cases & 3 deaths); & Wangata (5 cases & 3 deaths).
- [5 HCW affected - 4 confirmed & 2 deaths].
- At least 628 contacts identified & being followed up.
- 7,560 doses of recombinant vesicular stomatitis virus–Zaire Ebola virus (rVSV-ZEBOV) vaccines were delivered to Kinshasa by WHO - The initial vaccination is targeting immediate contacts to confirmed cases, contacts of contacts and frontline health workers. As of 24 May 2018, a total of 154 people have been vaccinated in two rings in Mbandaka
- Regional risk is high after cases were confirmed in Mbandaka - major commercial hub - with road, river, & air transport poses a risk to neighbouring countries.



EVD Preparedness activities in South Sudan

- Ministerial statement on EVD and its prevention
- Updated EVD contingency planning
- Ministerial mission to Yambio to enhance surveillance and compliance with IHR (2005) border control measures
- Screening of international travelers at JIA and other PoE based on risk assessment
- Designation an EVD isolation facility
- Updating EVD SoPs
- Training of rapid response teams
- Implementation of other preparedness interventions

Response | Suspect outbreaks being investigated

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
13Mar18	meningitis	16 (00)	Duk	Ayueldit	On 12 Mar 2018; a 3 year old male from Buongjok area, Ayueldit payam was admitted to Padiet PHCC. The health partner SMC requested for guidance on managing the case and the WHO Bor team shared the meningitis case management guidelines. Surveillance has been stepped up but no additional cases have been identified.
17Feb18	meningitis	173 (31)	Torit	Iyire and Imurok	After rumors of strange illness in Iyire, several RRT verification and response missions have been undertaken since 20Feb18. Torit county surpassed in the alert and epidemic thresholds in week 7 and week 9 respectively. Conclusive laboratory confirmation underway. Overall coordination, case surveillance, line listing, and investigation are ongoing. Transmission declined after week 9 with the weekly attack rate falling below the alert and epidemic threshold in weeks 11-18, 2018.
10Mar18	meningitis	3 (0)	Cueibet		Since 10 Mar 2018, at least three suspect meningitis cases have been reported by CUAMM in Cueibet hospital. However, no samples were collected.
02Feb2018	meningitis	52 (06)	Aweil South (14cases) Aweil East (18 cases) Aweil West (11 cases) Aweil North (4 cases)	Aweil hub	Since 2Feb2018, at least 52 suspect cases (6 deaths) have been reported in Aweil hub. Six samples positive for <i>Streptococcus pneumoniae</i> following rapid pastorex testing or showed gram positive diplococci on gram stain. None of the affected counties exceeded the alert threshold for meningitis.
06Jan18	meningitis	02 (00)	Abyei and Twic	Rumkor and Pan-nyok	The two suspect cases were treated in Agok hospital on 4 Jan and 29 Jan respectively with initial diagnoses of severe malaria but final diagnosis was bacterial meningitis. Rapid pastorex testing sample from the second suspect case from Twic county was positive for <i>Streptococcus pneumoniae</i> .
14Feb18	meningitis	21(03)	Wau (Jur River)	Udici, Roc Roc Dong	Since 14 Feb; 20 suspect meningitis cases have been reported from Wau (11 cases - 2deaths) and Jur River (9 cases - 1 death) counties. A suspect case involving a 45 year old male from Jur River was admitted in Comboni hospital on 28 Feb 18. PCR testing was positive for <i>Streptococcus pneumoniae</i> . Another suspect case tested positive for NmA by rapid pastorex at NPHL on 27/4/18.

Response | Suspect outbreaks being investigated

Date of report	Disease suspected	Number cases (deaths)	County	Payam	Status of investigations
16Mar2018	Measles	08(01)	Mayom	Riak & Lol Maroal	Suspect measles cases reported from Riak payam in Nyebola village since 9 Mar 2018. Four samples were obtained by MSF-CH for testing. Three of the four samples tested were positive for rubella IgM.
16Feb18	Health effects of petroleum drilling	Unspecified	Pariang	Pariang	A newswire indicates the Mayor of Pariang in Ruweng State has appealed to the Ministry of Health to establish some health conditions affecting people in the oil producing area. bit.ly/2EIndTP #SouthSudan. Initial verification details to follow
31Mar2018	Suspect meningitis /malaria	12(08)	Gogrial West	Kuach South	On 28 th Mar 2018; the Director Gogrial West reported community deaths in Kuach South that were verified by the RRT on 29 Mar 2018. The clinical and lab tests on suspect cases were consistent with malaria and the cases responded to treatment with ACTs. All the deaths were 10 years and above and 50% of the deaths were 20 years and above. Given the dramatic nature of symptoms, the other differential diagnosis to keep an eye on is epidemic meningitis. No new cases reported in weeks 14 and 15.
12/Apr/18	pertussis	18(00)	Fangak	Bei	Suspect pertussis cases have been reported by Mandeang PHCU and Kuephone PHCU in Fangak county. At least 11 suspect cases have been reported from Bei payam and another 7 suspect cases from Jiath. The response instituted by the partner CMA - entails treatment of cases and prophylaxis to close contacts and enhancing routine immunization for the infants.
22/05/18	cholera	2	Lopa	Imehejek	Two suspect cholera cases reported from Imehejek, Lopa from 22May18; the index ate cold food at a local market; direct RDT positive for cholera; all two samples negative for cholera after culturing in NPHL.
21/05/2018	measles	8	Rumbek Center	Teyau	Eight suspect measles cases reported from Teyau, Rumbek Centre - MMT to be dispatched for the investigation. Specimens collected for testing.
23/05/18	measles	2	Mayom	Tam & Wangbur	Two suspect measles cases reported from Mayom (Tam & Wangbur payams) samples sent to Juba by MSF-CH
16/05/18	measles	1	Torit	Nyong	One suspect measles case reported from Nyong payam in Torit. Specimen collected

**This bulletin is produced by the Ministry of Health with
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The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

More information can be found at <http://ewars-project.org>

